

**IN THE CLAIMS:**

Please amend claim 4 as follows:

Please cancel claims 1-3, 5-22 without prejudice.

- a<sup>1</sup>
- 5 4. (Amended) An isolated or recombinant [nucleic acid] polynucleotide encoding [said protein of Claim 1] at least 15 contiguous amino acid residues of the mature portion of SEQ ID NO: 10 [, where said portion consists of sequence from the coding region of SEQ ID NO: 1, 3, 5, 7, 9, or 11].

10 **NEW CLAIMS:**

Please add new claims 23-45 as follows:

- 15 23. (new) The polynucleotide of Claim 4, encoding at least 19 contiguous amino acid residues of the mature portion of SEQ ID NO: 10.
24. (new) An expression vector comprising said polynucleotide of Claim 4.
- 20 25. (new) A method of making an immunogenic polypeptide comprising expressing a vector of Claim 24, thereby producing said immunogenic polypeptide.
- a<sup>2</sup> 25 26. (new) A method of producing a detectable nucleic acid duplex, comprising contacting a complementary polynucleotide of Claim 4 with a nucleic acid for a time sufficient to produce said duplex under stringent wash conditions of 55° C and less than 400 mM salt; and detecting said duplex.
27. (new) The polynucleotide of Claim 23, encoding at least 25 contiguous amino acid residues of SEQ ID NO: 10.
- 30 28. (new) An expression vector comprising said polynucleotide of Claim 27.
29. (new) A method of making an immunogenic polypeptide comprising expressing a vector of Claim 28, thereby producing said immunogenic polypeptide.

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30. (new) An isolated or recombinant polynucleotide that hybridizes under stringent wash conditions of 55° C and less than 400 mM salt to an open reading frame of SEQ ID NO: 9 or a variant of SEQ ID NO: 9, wherein said variant is a result of the degeneracy of the genetic code.

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31. (new) The polynucleotide of Claim 30, wherein said wash conditions are 65° C and less than 300 mM salt.

32. (new) The polynucleotide of Claim 4, comprising at least

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- a) 50 contiguous nucleotides of SEQ ID NO: 9; or
- b) at least two non-overlapping segments of at least 15 contiguous nucleotides of SEQ ID NO: 9.

33. (new) A cell containing said expression vector of Claim 24.

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34. (new) A cell containing said expression vector of Claim 28.

35. (new) The polynucleotide of Claim 4, further encoding a plurality of segments selected from the following group:

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- a) residues 1-38 of SEQ ID NO: 10;
- b) residues 39-64 of SEQ ID NO: 10;
- c) residues 65-75 of SEQ ID NO: 10;
- d) residues 76-96 of SEQ ID NO: 10;
- e) residues 97-110 of SEQ ID NO: 10;
- f) residues 111-132 of SEQ ID NO: 10;
- g) residues 133-150 of SEQ ID NO: 10;
- h) residues 151-176 of SEQ ID NO: 10;
- i) residues 177-206 of SEQ ID NO: 10;
- j) residues 207-229 of SEQ ID NO: 10;
- k) residues 230-245 of SEQ ID NO: 10;
- l) residues 246-270 of SEQ ID NO: 10;
- m) residues 271-290 of SEQ ID NO: 10;
- n) residues 291-319 of SEQ ID NO: 10; and
- o) residues 320-364 of SEQ ID NO: 10.

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36. (new) An isolated or recombinant polynucleotide encoding a polypeptide of SEQ ID NO: 10.

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cont.

37. (new) The polynucleotide of Claim 36, that is a natural sequence.

38. (new) The polynucleotide of Claim 37, isolated from nature.

5 39. (new) The polynucleotide of Claim 37, that, as a result of the degeneracy of the genetic code, is a variant sequence.

40. (new) The polynucleotide of Claim 36, that encodes a polypeptide, comprising a conservative substitution.

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41. (new) The polynucleotide of Claim 40, wherein said substitution is in an extracellular segment of said polypeptide.

15 42. (new) The isolated polynucleotide of Claim 27, that further encodes at least 15 contiguous residues of SEQ ID NO: 10.

43. (new) The isolated polynucleotide of Claim 42, that encodes at least 25 contiguous amino acid residues of SEQ ID NO: 10.

20 44. (new) A kit for detecting a nucleic acid, comprising an isolated or recombinant nucleic acid probe comprising at least 22 contiguous nucleotides of the complement of the polynucleotide of Claim 36 that selectively hybridizes under stringent hybridization and wash conditions with a target nucleic acid of the open reading frame of the polynucleotide of Claim 36 to form a detectable  
25 nucleic acid duplex, and detecting means; wherein detection of said duplex indicates the presence of said nucleic acid.

45. (new) The polynucleotide of Claim 36, that encodes a mature polypeptide.

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